

Application No. : 10/679,963
Amdt. Dated : September 19, 2005
Reply To O.A. Of : May 17, 2005

Amendments To The Claims

The following listing of claims replaces all prior versions and listings of claims in the application. The listing of claims presents each claim with its respective status shown in parentheses.

Claims 1. – 10. (Canceled).

Claim 11. (Currently Amended) An optical probe capable of outputting a signal indicative of light transmitted through body tissue, the optical probe comprising:

one or more emitters capable of emitting light;

detector circuitry capable of detecting light transmitted through body tissue of a patient and outputting a signal usable to determine at least one physiological parameter of the patient;

a substantially rigid probe housing including a substantially planar lens side, wherein said probe housing houses a first positioning member and
~~housing the one or more emitters and the detector circuitry;~~

a single substantially circular substantially convex emitter lens protruding a distance from the probe housing;

a single substantially circular substantially convex detector lens protruding about the distance from the probe housing; and

a protruding optical barrier protruding ~~about the distance from the~~ probe housing substantially along an axis perpendicular to a line connecting between the single protruding-emitter lens and the single protruding-detector lens, wherein the protruding-optical barrier is positioned to reduce an amount of emitted light capable of reaching the detector circuitry without being transmitted through body tissue, wherein only the single emitter lens, the single detector lens, and the optical barrier protrude from the substantially planar lens side of the probe housing, thereby reducing an amount of protruding structure recessing into the body tissue of the patient; and

~~an attachment mechanism including at least one second positioning member mechanically mateable with the first positioning member to position the probe housing with respect to the attachment mechanism, wherein attachment of the attachment mechanism to the body tissue positions the~~

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~~probe housing against the body tissue with sufficient pressure to noninvasively recess the protruding optical barrier into the body tissue and to noninvasively recess the protruding emitter lens and the protruding detector lens into the body tissue substantially along a plane thereof.~~

Claims 12. – 23. (Canceled).

Claim 24. (Previously Presented) The optical probe of Claim 11, wherein the emitter lens protrudes a range of about 0.025 to about 0.075 inches.

Claim 25. (Previously Presented) The optical probe of Claim 24, wherein the emitter lens protrudes about 0.050 inches.

Claim 26. (Previously Presented) The optical probe of Claim 11, wherein the detector lens protrudes a range of about 0.010 to about 0.040 inches.

Claim 27. (Previously Presented) The optical probe of Claim 26, wherein the detector lens protrudes about 0.020 inches.

Claim 28. (Previously Presented) The optical probe of Claim 11, wherein one of the one or more emitters emits light at a wavelength unexpected by an oximeter communicating with said optical probe, and wherein said unexpected wavelength causes the oximeter to determine more accurate values for said at least one physiological parameter.

Claim 29. (Previously Presented) The optical probe of Claim 28, wherein said unexpected wavelength ranges from about 650 to about 660 nanometers.

Claim 30. (Previously Presented) The optical probe of Claim 29, wherein said unexpected wavelength comprises about 654 nanometers.

Claim 31. (New) The optical probe of Claim 11, wherein the probe housing further comprises a first positioning member and wherein said optical probe further comprises an attachment mechanism including at least one second positioning member mechanically mateable with the first positioning member to position the probe housing with respect to the attachment mechanism, wherein attachment of the attachment mechanism to the body tissue positions the probe housing against the body tissue with sufficient pressure to noninvasively recess the protruding optical barrier, the protruding emitter lens and the protruding detector lens into the body tissue substantially along a plane thereof.

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Claim 32. (New) The optical probe of Claim 31, wherein the attachment mechanism further comprises a pressure applicator capable of applying sufficient pressure against the probe housing to assist the attachment mechanism in accomplishing the noninvasive recessing.

Claim 33. (New) The optical probe of Claim 32, wherein the pressure applicator comprises a substantially convex biasing member.

Claim 34. (New) The optical probe of Claim 31, wherein the attachment mechanism comprises a headband.

Claim 35. (New) The optical probe of Claim 34, wherein the headband further comprises:

a plurality of the second positioning members, each member mechanically mateable with the first positioning member to provide for a plurality of potential positions of the probe housing with respect to the attachment mechanism; and

indicia on the headband instructing a caregiver which of the potential positions will apply a predetermined amount of pressure against the probe housing.

Claim 36. (New) The optical probe of Claim 35, wherein the indicia include ruler-like indicia.

Claim 37. (New) The optical probe of Claim 31, wherein the attachment mechanism comprises an adhesive tape.

Claim 38. (New) The optical probe of Claim 37, wherein the second positioning member is substantially centered with respect to the adhesive tape.